



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

646.9711
Job Sheet 172688



Part No: 646.9711

Job Qty: 40 ea

Part Name: Blade



Part Weight: 0 lbs

Status: Scheduled

Priority: High

Job Created: 2/21/18

Job Tracking No:

Due Date: 3/7/18

Created By: Linda Lacelle

Type: SOLD

Description:

Note: DWG REV D2 SHEET 5 IPP REV:A NEW ISSUE 12/09/24 JFS VERIFY BY:DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	40 Ea		3/3/18	0.00	0.00	Start Up Machining-1		
100	Bandsaw	40 pcs		3/3/18	0.00	1.25	Bandsaw1		
110	CNC Vertical Machining	40 pcs		3/6/18	0.13	40.00	HAAS1-1		
120	QC	40 pcs		3/6/18	0.00	0.00	QC2 Machining-1		
130	QC	40 pcs		3/6/18	0.00	0.00	QC8 Machining-1		
140	Outsource	40 pcs		3/6/18			MEI001-VC	10	
150	Packaging	40 pcs		3/6/18	0.00	0.00	Packaging2		
155	QC	40 pcs		3/6/18	0.00	0.00	QC5		
160	SprayPaint	40 pcs		3/7/18	0.00	1.33	Spray Paint		
170	QC	40 pcs		3/7/18	0.00	0.00	QC14		
180	Packaging	40 pcs		3/7/18	0.00	0.00	Packaging3-1		
190	QC21-SA	40 Ea		3/7/18	0.00	0.00	QC21		

Part Op 100 - Cut Blank at 4.625"

Descriptions: 110 - 1-Machine per folio FB135

140 - PO to Metcor: FINISH: HEAT TREAT TO 58-62 RC ROCKWELL HARDNESS PART ARE MADE FROM AISI A2 TOOL STEEL PLEASE NOTE: DETAIL C OF C REQUIRED

160 - ***THIN COAT OF PRIMER*** PRIME AS PER DWG, SEE NOTE #4

138747

MAR 2 8 2018

MAR 1 6 2018

P/O: 39224

DAS
13
9-88

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
MSTEEL-A2-B0.500X1.250	AISI A2 Tool Steel Bar, 0.500 X 1.250	15.4400 ft (.386 ea)	90-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	MSTEEL-A2-B0.500X1.250	15	46	0

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ M ☐ Therm ☐ Cross tube ☐ Small Esh ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Engineering ☐ Quality ☐ Other ☐	
Date : _____		Step #: _____		_____ (SI042) Approval	
Description Work Order Deviation				_____ Completed By	
				_____ Hand / Supervisor Approval Verification	
				_____ / QA Coordinator Approval	
Root Cause					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temp ☐	situated Wrong	
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Outside Dimensions	
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/ ☐	Per/Under tolerance	
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broke ☐	Part Incorrect	
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspe ☐	Part Lost/Missing	
Material ☐	Use for Testing ☐	Cuffs ☐	Conte ☐	Part Moved	
Internal Transport ☐	Poor Information ☐	Crushing ☐	Coun ☐	rawing	
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut T ☐	nish	
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instru ☐	Misread	
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill ☐	urning Sequence	
Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER : _____			

Date: 03/04/18

Inspector: _____
Revision: _____
Serial No/Batch: 8047622
Part: 646.9711
Job No: 172688
Container No: 8047622

1270 Aberdeen Street
Newbury, ON K5A 1K7
CANADA
TEL: 1 813 632-8200
Email: sales@dartaero.com
www.dartaerospace.com

DART
AEROSPACE

Part Specifications					
Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Blade	0.340Inches + 0.000 - 0.005	0.340 0.335		
2	Blade	0.177Inches + 0.005 - 0.001	0.182 0.176		
3	Blade	3.200Inches ± 0.005	3.205 3.195		
4	Blade	0.600Inches ± 0.005	0.605 0.595		
5	Blade	0.985Inches ± 0.005	0.990 0.980		
6	Blade	2.400Inches ± 0.005	2.405 2.395		
7	Blade	1.200Inches ± 0.005	1.205 1.195		
8	Blade	0.250Inches ± 0.005	0.255 0.245		
9	Blade	37.2Angle ± 0.5	37.7 36.7		
10	Blade	0.290Inches ± 0.010	0.300 0.280		
11	Blade	30.0Angle ± 0.5	30.5 29.5		

Plex 2/21/18 11:42 AM dart.lacelle.linda

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO039224

Supplier: MEI001-VC
Metcor Inc.
560 Boul. Arthur Sauve
Saint-Eustache
QC
J7R 5A8 Canada
Phone: 450 473 1884
Fax: 450 491 5498

PO No: PO039224

PO Date: 3/6/18

Due Date: 3/13/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Lavoie, Chantal
clavoie@dartaero.com

E-MAILED
MAR 16 2018

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground

Pynt Terms: Net 30

Freight Terms:

Special Comments: note: part are rush required on or before March 13.

Items

Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	172688	646.9711	Blade PO to Metcor: FINISH: HEAT TREAT TO 58-62 RC ROCKWELL HARDNESS PART ARE MADE FROM AISI A2 TOOL STEEL PLEASE NOTE: DETAIL C OF C REQUIRED	Firmed	3/13/18	40 pcs <i>40x</i>	0 pcs	40 pcs	\$7.8125/pcs <i>At 18/03/20</i>	\$312.50

Grand Total: \$312.50

Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

CY

Plex 3/16/18 11:06 AM dart.tsimiklis.chrisoula

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Détaillé

Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
325951	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
PO039224	N/A	A2		
SPÉCIFICATIONS DU PROCÉDÉ processing specifications				
VAC HARDEN				
HARDEN AND TEMPER				
EXIGENCE / requirement	SPÉCIFICATIONS / specified		TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
HARDNESS	58 - 62 HRC		5	59 - 61 HRC
QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description		
40	10	646.9711 (40) 646.9711 JOB 172688 1 BOITE DE CARTON		

COMMENTAIRES / comments

VAC HARDEN 1825F, 1 HR
DOUBLE TEMPER 450F, 2:30 HRS

Heat treatment (HT) was performed with equipment that meets the requirements of requested specification. All HT operations were performed in compliance with the required HT specification and all verifications have been performed and documented. No unauthorized changes were performed in regards to the HT. We certify that the material was manufactured, sampled, tested and inspected in accordance with the material specification and the purchase order and was found to meet the requirements.

This document and any attached documents may contain confidential or proprietary information and may be subject to export control laws and regulations. If you are not the intended recipient, you are notified that any dissemination, copying of this e-mail and any attachments thereto or use of their contents by any means whatsoever is strictly prohibited. Unauthorized export or re-export is prohibited.

Le traitement thermique (TT) a été fait en utilisant des équipements en conformité avec la spécification demandée. Toutes les opérations de TT ont été faites en conformité avec les requis de la spécification demandée et toutes les vérifications et les tests demandés ont été faites et documentés. Aucun changement n'a été faite par rapport au TT. On certifie que le matériel a été fabriqué, échantillonné, testé et inspecté en accord avec les spécifications du matériel et le bon de commande et le matériel rencontre les exigences spécifiées.

Ce document et les documents qui lui sont joints peuvent contenir des informations confidentielles, être soumis aux réglementations relatives au contrôle des exportations ou ayant un caractère privé. S'ils ne vous sont pas destinés, nous vous signalons qu'il est strictement interdit de les divulguer, de les reproduire ou d'en utiliser de quelque manière que ce soit le contenu. Toute exportation ou réexportation non autorisée est interdite.

APPROUVÉ par / Approved by:

Isabel Otero

Isabel Otero
QA Technician



DATE: 2018-03-13